Clinical Infectious Diseases

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ARTICLES AND COMMENTARIES

645 Early Fecal Microbiota Transplantation Improves Survival in Severe Clostridium difficile Infections
Marie Hocquart, Jean-Christophe Lagier, Nadim Cassir, Nadia Saidani, Carole Eldin, Jad Kerbaj, Marion Delord, Camille Valles, Philippe Brouqui, Didier Raoult, and Matthieu Million

Fecal microbiota transplantation (FMT) prevents recurrences in Clostridium difficile infection (CDI), but its effects on mortality remain unknown. Here, we show that early FMT reduces mortality in severe but not nonsevere CDI and propose to update the recommendations accordingly.

651 Editorial Commentary: Too Early to Recommend Early Fecal Microbiota Transplantation in Patients With Severe Clostridium difficile Infection, or Not Too Early?
Antoine Andremont

653 Clinical Features of Acute Flaccid Myelitis Temporally Associated With an Enterovirus D68 Outbreak: Results of a Nationwide Survey of Acute Flaccid Paralysis in Japan, August–December 2015
Pin Fee Chong, Ryutaro Kira, Harushi Mori, Akihisa Okumura, Hiroyuki Torisu, Sawa Yasumoto, Hiroyuki Shimizu, Tsuguto Fujimoto, Nozomu Hanaoka, Susumu Kusunoki, Toshiyuki Takahashi, Kazunori Oishi, and Keiko Tanaka-Taya; for the Acute Flaccid Myelitis Collaborative Study Investigators

Fifty-nine acute flaccid myelitis cases were reported nationwide, coincident with enterovirus D68 (EV-D68) outbreak from August to December 2015. Strong temporal association was noted, and EV-D68 was detected from some cerebrospinal fluid and blood specimens. Antiganglioside antibodies were identified in some patients, and prognostic factors were analyzed.

665 2015–2016 Vaccine Effectiveness of Live Attenuated and Inactivated Influenza Vaccines in Children in the United States

This test-negative case-control study showed live attenuated influenza vaccine and inactivated influenza vaccine were effective against any influenza in 2015–2016.

673 Editorial Commentary: The Challenge of Vaccine Policy-making With Imperfect Data
Justin R. Ortiz

676 High Rates of Human Fecal Carriage of mcr-1–Positive Multidrug-Resistant Enterobacteriaceae Emerge in China in Association With Successful Plasmid Families
Lan-Lan Zhong, Hang T. T. Phan, Cong Shen, Karina-Doris Vihta, Anna E. Sheppard, Xi Huang, Kun-Jiao Zeng, Hong-Yu Li, Xue-Fei Zhang, Sandip Patil, Derrick W. Crook, A. Sarah Walker, Yong Xing, Jia-Lin Lin, Lian-Qiang Feng, Yohei Doi, Yong Xia, Nicole Stoesser, and Guo-Bao Tian

mcr-1 renders colistin ineffective, which is of relevance to the management of drug-resistant Enterobacteriaceae infections. We highlight rapid increases in human gastrointestinal mcr-1 carriage prevalence (2011–2016, Guangzhou), using bacterial genomics to characterize the genetic diversity facilitating mcr-1 spread among humans/animals.
High Cryptococcal Antigen Titers in Blood Are Predictive of Subclinical Cryptococcal Meningitis Among Human Immunodeficiency Virus-Infected Patients


Blood cryptococcal antigen (CrAg) titers are associated with concurrent subclinical cryptococcal meningitis in at least a third of CrAg-positive patients with advanced human immunodeficiency virus infection, which may increase mortality rates. Blood CrAg titers can guide management in this population.

HANDOC: A Handy Score to Determine the Need for Echocardiography in Non-β-Hemolytic Streptococcal Bacteremia

Torgny Sunnerhagen, Amanda Tornell, Maria Vikbrant, Bo Nilson, and Magnus Rasmussen

The HANDOC score (Heart murmur or auscultation, Aetiology, Number of cultures, Duration of symptoms, Only 1 species, and Community-acquired infection) has high sensitivity and specificity to predict the presence of infective endocarditis in patients with non-β-hemolytic streptococcal bacteremia.

Association of Obesity, Diabetes, and Risk of Tuberculosis: Two Population-Based Cohorts

Hsien-Ho Lin, Chieh-Yin Wu, Chih-Hui Wang, Han Fu, Knut Lönnroth, Yi-Cheng Chang, and Yen-Tsung Huang

In 2 large Taiwanese cohorts, obesity had a harmful effect on tuberculosis mediated through diabetes but had a strong protective effect not mediated through diabetes. Individuals who were simultaneously obese and diabetic had a 70% reduction in tuberculosis risk.

Tuberculin Skin Test Conversions and Occupational Exposure Risk in US Healthcare Workers

Claudia C. Dobler, Wigdan H. Farah, Mouaz Alsawas, Khaled Mohammed, Laura E. Breeher, M. Hassan Murad, and Robin G. Mollella

This study provides evidence that the current US practice of testing healthcare workers (HCWs) for tuberculosis infection at regular intervals is unnecessary (and can result in false-positive tests) in settings with a very low background incidence of tuberculosis. Testing HCWs at baseline and after tuberculin exposure only should be considered in this context.

Increases in Neisseria gonorrhoeae With Reduced Susceptibility to Azithromycin Among Men Who Have Sex With Men in Seattle, King County, Washington, 2012–2016

Lindley A. Barbee, Olusegun O. Soge, David A. Katz, Julia C. Dombovski, King K. Holmes, and Matthew R. Golden

In Seattle, Washington, between 2014 and 2016, 5% of Neisseria gonorrhoeae cases among men who have sex with men had reduced azithromycin (AZM) susceptibility. The emergence of gonorrhea with reduced susceptibility to AZM should prompt reconsideration of gonorrhea treatment guidelines.

Treatment of Chronic Q Fever: Clinical Efficacy and Toxicity of Antibiotic Regimens

Sonja E. van Roeden, Chantal P. Bleeker-Rovers, Marieke J. A. de Regt, Linda M. Kampichler, Andy I. M. Hoepelman, Peter C. Wever, and Jan Jelrik Oosterheert

Treatment of chronic Q fever with tetracyclines (TET) plus quinolones (QNL) is not inferior to treatment with TET plus . Both combination regimens are accompanied by high toxicity. Treatment with TET or QNL monotherapy was frequently stopped due to insufficient clinical response.

Immediate Antiretroviral Therapy Decreases Mortality Among Patients With High CD4 Counts in China: A Nationwide, Retrospective Cohort Study

Yan Zhao, Zunyou Wu, Jennifer M. McGooagan, Cynthia X. Shi, Aihua Li, Zhihui Dou, Ye Ma, Qianqian Qin, Ron Brookmeyer, Roger Detels, and Julio S. G. Montaner

We enrolled 34 581 individuals newly diagnosed with human immunodeficiency virus infection with CD4 cell counts >500 cells/µl and found that initiation of antiretroviral therapy within 30 days of diagnosis was associated with a 63% reduction in overall mortality at 12 months of follow-up.

High Rates of Subsequent Asymptomatic Sexually Transmitted Infections and Risky Sexual Behavior in Patients Initially Presenting With Primary Human Immunodeficiency Virus-1 Infection

Dominique L. Braun, Alex Marzel, Daniela Steffens, Peter W. Schreiber, Christina Grube, Alexandra U. Scherrer, Roger D. Kouyos, and Huldrych F. Günthard; for the Swiss HIV Cohort Study

In this prospective cohort study of human immunodeficiency virus (HIV) infected individuals with initial diagnosis of acute or recent HIV infection, we report high period prevalence and incidence of mostly asymptomatic sexually transmitted infections and correlating factors that may assist in prioritizing screening.

Cardiovascular Disease Prevention Policy in Human Immunodeficiency Virus: Recommendations From a Modeling Study

Mikaela Smit, Roxan A. van Zoest, Brooke E. Nichols, Iyonca Vaartjes, Colette Smit, Marc van der Valk, Ard van Sighem, Ferdinand W. Wit, Timothy B. Hallett, and Peter Reiss; for The Netherlands AIDS Therapy Evaluation in The Netherlands (ATHENA) Observational HIV Cohort

Annual cardiovascular disease (CVD) incidence and costs among HIV-infected individuals in the Netherlands is predicted to increase between 2015 and 2030. Traditional CVD prevention interventions can maximize cardiovascular health and defray future costs, particularly if targeting high-risk patients.

Familial Aggregation and Heritability of Loa loa Microfilaraemia

Serge Eyebie, Audrey Sabbagh, Sébastien D. Pion, Hugues C. Nana-Djoung, Joseph Kamgno, Michel Boussinesq, and Cédric B. Chesnais

A significant genetic component governs L. loa microfilarial density, leading to a hypothesis that a genetic predisposition to be hypermicrofilaric exists. This finding should be taken into account while developing sampling strategies (including a household-level sampling) to identify villages where community-directed treatment with ivermectin cannot be applied.
Impact of Public Safety Policies on Human Immunodeficiency Virus Transmission Dynamics in Tijuana, Mexico
Sanjay R. Mehta, Antoine Chaillon, Tommi L. Gaines, Patricia E. Gonzalez-Zuniga, Jamila K. Stockman, Horatio Almanza-Heyes, Jose Roman Chavea, Alicia Vera, Karla D. Wagner, Thomas L. Patterson, Brianna Scott, Davey M. Smith, and Staffanie A. Strathdee

Our findings demonstrate that molecular epidemiologic monitoring of human immunodeficiency virus (HIV) epidemics using HIV sequence data can identify growing clusters of transmission. Once identified, in-depth analyses may discover structural factors contributing to the change in transmission dynamics addressable through public health interventions.

Bohdan Nosyk, Jeong E. Min, Emanuel Krebs, Xiao Zang, Miranda Compton, Reka Gustafson, Rolando Barrios, and Julio S.G. Montaner; for the STOP HIV/AIDS Study Group

We used a dynamic human immunodeficiency virus (HIV) transmission model to determine the cost-effectiveness of HIV care interventions in British Columbia, Canada, in 2011–2013. HIV testing and treatment initiation interventions were cost-effective, while the treatment retention intervention was not.

Understanding the Promises and Hurdles of Metagenomic Next-Generation Sequencing as a Diagnostic Tool for Infectious Diseases
Patricia J. Simner, Steven Miller, and Karen C. Carroll

Metagenomic next-generation sequencing (mNGS) has emerged as a promising single, universal pathogen detection method for infectious disease diagnostics. With the development of mNGS assays, it is essential for treating practitioners to understand both the power and limitations of the method as a diagnostic tool.

Rapid Detection of Powassan Virus in a Patient With Encephalitis by Metagenomic Sequencing
Anne Plantadosi, Sanjat Kanjilal, Vijay Ganesh, Arjun Khanna, Emily P. Hyle, Jonathan Rosand, Tyler Bold, Hayden C. Metsky, Jacob Lemieux, Michael J. Leone, Lisa Freimark, Christian B. Matranga, Gordon Adams, Graham McGrath, Siavash Zamirpour, Sam Telford III, Eric Rosenberg, Tracey Cho, Matthew P. Frosch, Marcia B. Goldberg, Shibani S. Mukerji, and Pardis C. Sabeti

Published data suggest that hemoglobinopathies may alter the pharmacokinetic and pharmacodynamic properties of the artemisinin group of antimalarial drugs. The present systematic review suggests that these changes are not clinically significant and that recommended doses remain appropriate in such patients.

Colistin Area Under the Time–Concentration in Children Treated With Intravenous Loading Dose and Maintenance Therapy
Alessio Mesini, Anna Loy, Marco Gattorno, Andrea Moscatelli, Roberto Bandettini, Mauria Faraci, Giuliana Cancemi, and Elio Castagnola

We used a dynamic human immunodeficiency virus (HIV) transmission model to determine the cost-effectiveness of HIV care interventions in British Columbia, Canada, in 2011–2013. HIV testing and treatment initiation interventions were cost-effective, while the treatment retention intervention was not.

Colistin Pharmacokinetics in Pediatrics
Sophie Magréault, Nicolas Grégoire, Sandrine Marchand, and William Coast

Reply to Magréault et al
Giuliana Cancemi, Alessio Mesini, and Elio Castagnola

Dose Suggestions for Intravenous Colistin in Pediatric Patients: Caution Required
Roger L. Nation

Increases in Asymptomatic Early Syphilis May Reflect Increases in Repeated Episodes of Syphilis and Not Enhanced Screening
Chris Kenyon

Reply to Kenyon
Eric P. F. Chow, Christopher K. Fairley, Denton Callander, Basil Donovan, Rebecca Guy, and Marcus Y. Chen